

CLAIMS

What is claimed is:

1. An electronic system comprising:

a memory system of which at least a portion is allocated as a frame buffer to store frame buffer graphics data to be repeatedly retransmitted to a display device wherein the image incorporates at least one text character; and

a graphics controller coupled to the memory system, the graphics controller having compression logic employing a lossy compression algorithm to compress the frame buffer graphics data to be stored in the frame buffer, and having decompression logic to repeatedly decompress the frame buffer graphics data as the frame buffer graphics data is repeatedly retrieved from the frame buffer to be repeatedly retransmitted to the display device.

2. The electronic system of claim 1, further comprising a processor coupled to the memory system and sharing the memory system with the graphics controller such that the processor executes instructions stored in the memory system.

3. The electronic system of claim 2, further comprising a graphics data source accessible to the processor such that the processor controls the provision of input graphics data by the graphics data source to the graphics controller.

4. The electronic system of claim 1, wherein the compression logic utilizes a discrete cosine transform and quantization of DCT coefficients generated by the discrete cosine transform.

5. The electronic system of claim 1, wherein the compression logic converts the frame buffer graphics data to YUV colorspace.
6. The electronic system of claim 5, wherein the compression logic samples chrominance values in a 1:1 ratio with luminance values to limit blurring an orthogonal line of the at least one text character.
7. The electronic system of claim 1, further comprising a graphics data source coupled to the graphics controller such that the graphics controller receives input graphics data from the graphics data source, wherein the input graphics data is received in a compressed form, is stored by the graphics controller into the memory system while bypassing the compression logic, and is retrieved by the graphics controller from the memory system to be decompressed by the decompression logic.
8. The electronic system of claim 1, further comprising a font bitmap of an image of the at least one text character that is compressed by the compression logic, stored in the memory system, and is retrieved by the graphics controller from the memory system to be decompressed by the decompression logic.
9. An electronic system comprising:
 - a memory system of which at least a portion is allocated to store a font bitmap providing an image of at least one text character; and
 - a graphics controller coupled to the memory system, the graphics controller having compression logic employing a lossy compression algorithm to compress the font bitmap data in preparation for storage in the memory system, and having decompression logic to decompress the font bitmap data.

10. The electronic system of claim 9, further comprising a processor coupled to the memory system and sharing the memory system with the graphics controller such that the processor executes instructions stored in the memory system.
11. The electronic system of claim 10, further comprising a graphics data source accessible to the processor such that the processor controls the provision of input graphics data by the graphics data source to the graphics controller.
12. The electronic system of claim 11, wherein the compression logic utilizes a discrete cosine transform and quantization of DCT coefficients generated by the discrete cosine transform.
13. The electronic system of claim 9, further comprising frame buffer data incorporating font bitmap data that is decompressed by the decompression logic, wherein the frame buffer data is compressed by the compression logic prior to being stored in the memory system, and wherein the frame buffer data is subsequently decompressed by the decompression logic to be transmitted to a display device coupled to the graphics controller.
14. The electronic system of claim 1, further comprising a graphics data source coupled to the graphics controller such that the graphics controller receives input graphics data from the graphics data source, wherein the input graphics data is received in a compressed form, is stored by the graphics controller into the memory system while bypassing the compression logic, and is retrieved by the graphics controller from the memory system to be decompressed by the decompression logic.

15. A method comprising:

compressing graphics data representing at least a portion of a display image to be transmitted to a display device into compressed graphics data by way of a lossy compression algorithm;

storing the compressed graphics data into a memory system; and

repeatedly retrieving the compressed graphics data from the memory system and decompressing the compressed graphics data to repeatedly transmit the display image to the display device.

16. The method of claim 15, further comprising:

compressing a font bitmap of an image of at least one text character into a compressed font bitmap by way of a lossy compression algorithm;

storing the compressed font bitmap into the memory system;

retrieving the compressed font bitmap from the memory system;

decompressing the compressed font bitmap; and

employing the font bitmap to add an image of the text character to the display image to be transmitted to the display device.

17. The method of claim 16, wherein compressing the font bitmap comprises sampling chroma data in a 1:1 ratio with luminance data to limit blurring of an orthogonal line of the at least one text character.

18. The method of claim 15, further comprising:

receiving input graphics data from a graphics data source;

compressing the input graphics data into compressed input graphics data by way of a lossy compression algorithm;

storing the compressed input graphics data into the memory system;

retrieving at least a portion of the compressed input graphics data from the memory system;

decompressing the portion of the compressed input graphics data into a portion of input graphics data; and

employing the portion of input graphics data to add an image of the portion of input graphics data to the display image to be transmitted to the display device.

19. The method of claim 15, further comprising:
 - receiving compressed input graphics data that has been compressed by way of a lossy compression algorithm from a graphics data source;
 - storing the compressed input graphics data into the memory system;
 - retrieving at least a portion of the compressed input graphics data from the memory system;
 - decompressing the portion of the compressed input graphics data into a portion of input graphics data; and
 - employing the portion of input graphics data to add an image of the portion of input graphics data to the display image to be transmitted to the display device.
20. The method of claim 15, wherein compressing the graphics data comprises converting the graphics data into a form of YUV colorspace.
21. The method of claim 20, wherein compressing the graphics data comprises sampling chroma data in a 1:1 ratio with luminance data.